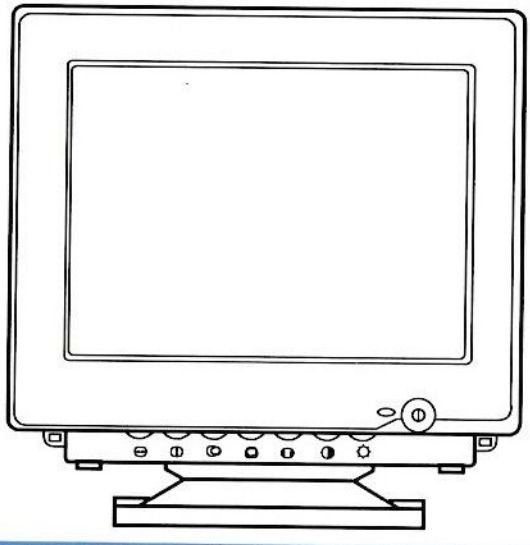
DAEWOO

COLOR MONITOR

Model No : CMC-1507X/1427X/1427S



energy

User's Guide

IMPORTANT SAFEGUARDS

1. Read all of these instructions.

2. Save these instructions for later use.

3. Unplug this monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Do not use attachments not recommended by the monitor manufacturer as they may cause hazards.

5. Do not use this monitor near water for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement or near a swimming pool, etc.

6. Do not place this monitor on an unstable cart, stand, or table. The monitor may fall, causing serious injury to a child or adult, and serious damage to the appliance.

7. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to ensure reliable operation of the monitor and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the monitor on a bed, sofa, rug, or other similar surface. This should never be placed near or over a radiator or heat register. This monitor should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

8. This monitor should be operated only from the type of power source indicated on the marking label. If you are not sure of the power supplied to your home, consult your monitor dealer or local power company.

9. This monitor is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a groundingtype power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet . Do not defeat the purpose of the groundingtype plug.

10. Do not allow anything to rest on the power cord. Do not locate this monitor where the cord will be abused by persons walking on it.

11. Follow all warnings and instructions marked on the monitor.

12. For added protection for this monitor during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the set due to lightning and powerline surges.

13. Do not overload wall outlets and extension cords as this can result in fire or electric shock.

14. Never push objects of any kind into this monitor through cabinet slots, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the monitor.

15. Do not attempt to service this monitor yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

16. Unplug this monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power cord or plug is damaged or frayed.

b. If liquid has been spilled into the monitor.

c. If the monitor has been exposed to rain or water.

d.If the monitor does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore normal operation.

e. If the monitor has been dropped or the cabinet has been damaged.

f. When the monitor exhibits a distinct change in performance this indicates a need for service.

17. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

18. Upon completion of any service or repairs to this monitor, ask the service technician to perform routine safety checks to determine that the monitor is in safe operating condition.

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio, TV technician for help.

CAUTION: Any changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

CANADIAN DEPARTMENT OF COMMUNICATIONS COMPLIANCE STATEMENT

This digital apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Avis de conformité aux normes du Ministère des Communications du Canada.

Le present appareil numérique n'emet pas de bruits radioélectriques depassant les limites applicables aux appareils numériques de Class A/de Class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicte par le ministère des communications du canada.

WICHTIGE INFORMATIONEN

Bitte lesen Sie alle diese Informationen, bevor Sie das Gerät in Betrieb nehmen! Lesen Sie sich außerdem die Bedienungsanleitung komplett und sorgfältig durch, da nur in diesem Fall eine problemlose Inbetriebnahme erwartet werden kann.

- Achten Sie darauf, daß das Gerät nur in eine 230V (220V) Schuko-Steckdose eingesteckt wird.
- Die Steckdose sollte jederzeit frei zugänglich sein um bei einem evtl. auftretenden Notfall das Gerät schnell vom Netz zu trennen.
- Achten Sie desweiteren darauf, daß die Netzanschlußleitung nicht mechanisch beansprucht oder sonstwie beschädigt wird.
- Offnen Sie das Gerät niemals! Im Inneren befinden sich Teile mit gefährlicher Spannung.
- Bevor Sie das Gerät reinigen, ziehen Sie bitte den Netzstecker aus der Steckdose. Säubern Sie dann das Gerät mit einem feuchten (keinesfalls tropfnassen) Lappen.
- Die in diesem Gerät entstehende Rôntgenstrahlung ist ausreichend abgeschirmt (Ortsdosisleistung in 0.1m Abstand weniger als 1.0µ Sv/h). Beschleunigungsspannung maximal 25Kv.
- Stellen Sie das Gerät an einem ergonomisch günstigen Ort auf und sorgen Sie dafür, daß der Monitor mit nach ZH1/618/10.80 geprüfter Peripherie betrieben wird, da nur unter diesen Umständen ein optimaler ergonomischer Betrieb des Gerätes sichergestellt ist.

Falls Sie dennoch Fragen haben, auf die die Bedienungsanleitung keine hinreichende Antwort geben kann, so kontaktieren Sie bitte den nächsten Fachhändler.

Maschinenlärminformationsverordnung 3. GSGV, 18.01 1991:
Der arbeitsplatzbezogene Schalldruckpegel beträgt 70 dB (A) oder weniger gemäß ISO 7779.

DAEWOO

EC DECLARATION OF CONFORMITY

We, Manufacturer / Importer

DAEWOO ELECTRONICS CO., Ltd
541, 5-Ga, Namdaemoon-Ro, Jung-Gu
Seoul, Korea

declare under our sole responsibility that the product,

Color monitor
CMC-1507X/1427X/1427S

to which this declaration relates is in conformity with
the following standard(s) or other normative document(s)

Safety : EN 60950/1992/AI:1993/A2 : 1993
EMC : EN 55022/4.1987, EN 50082-1/1992
EN 60555 Part 2-3/4.1987
IEC 801-5/1993

following the provisions of 89/336 EEC-EMC Directive
and the provisions of 73/23 EEC (Low Voltage Directive)

Handed over by : S. H. Kim, Managing Director.
Monitor Business Division.

September 4, 1995 Seoul Signature :

This product is also designed for IT power system with phase to phase voltage of 230V.

The power cord is used as a main disconnect device. Disconnect the power cord before servicing.
The outlet must be installed near the monitor and must be easily accessible.

As an ENERGY STAR Partner, Daewoo Electronics Co., Ltd. has determined that this product meets the Energy Star guidelines for energy efficiency.

* Optional

Emission Characteristics Tested by SEMKO

A sample of this type has been tested and has shown compliance with the guidelines in the swedish document MPR 1990:10

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Description for D-sub Connector

INTRODUCTION

This manual explains how to correctly install, operate and get the best performance from your monitor. Please read this user's manual carefully before installing your monitor, then keep it near your monitor for quick reference.

First, please check that the contents of the carton box corresponds with the following checklist :

- 14 or 15-inch color monitor
- Signal cable
- Power cord
- Tilt/swivel stand
- User's manual
- Warranty Card (Optional)

If there is any item missing or damaged, please contact your dealer. Please keep the carton box and packing materials so that you may properly store or transport your monitor.

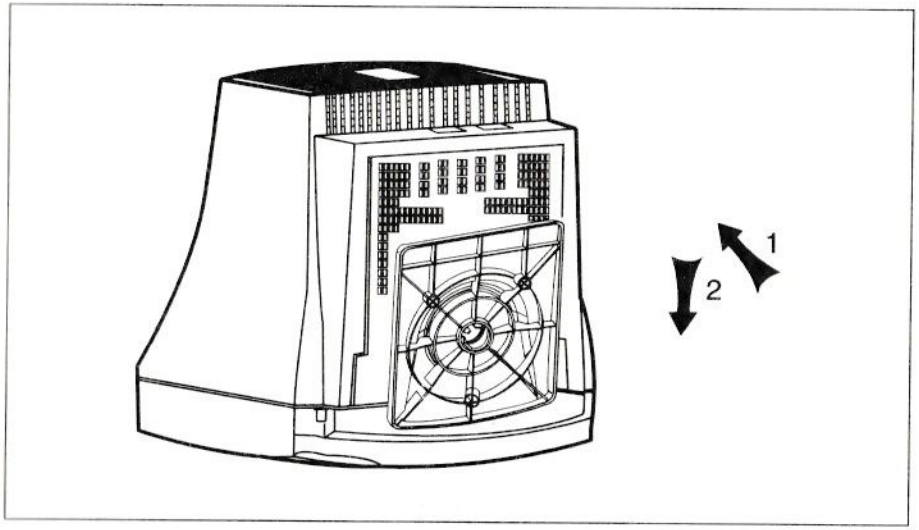
PRODUCT FEATURES

- The monitor automatically scans proper frequency within the following ranges:
  Horizontal Frequency ┌ 1507X/1427X : 31.4/35.1/35.5/37.5/37.8/46.8/48.0/48.3 KHz
  Horizontal Frequency └ 1427S : 31.4/35.1/35.5/37.5/37.8 KHz
  Vertical Frequency : 50 - 100 Hz
- This monitor complies with the energy saving requirements of EPA Energy Star Program, VESA DPMS (Display Power Management Signaling), and the Swedish NUTEK in order to prevent the environmental pollution and save the operating costs. The color of the power LED indicates the state of power consumption.
- Since the monitor can sense the power voltage automatically, you may use it at any voltage within its power input range.
- Provided that the CRT adopts MPR type, this monitor complies with MPR II regulations to reduce electromagnetic radiation which may have a harmful effect on human health (* Optional).
- The full screen feature provides a larger viewing area than a normal screen.
- The monitor has the ability to make picture totally flicker free. This will make your eyes more comfortable than before.
- The monitor is implemented with DDC (Display Data Channel)1/ DDC2B features if your computer complies with DDC1 / DDC2B of VESA (* Optional).
- The monitor is compatible with the Macintosh computers by using the Macintosh cable adapter.

SETUP

INSTALLING THE TILT/SWIVEL STAND

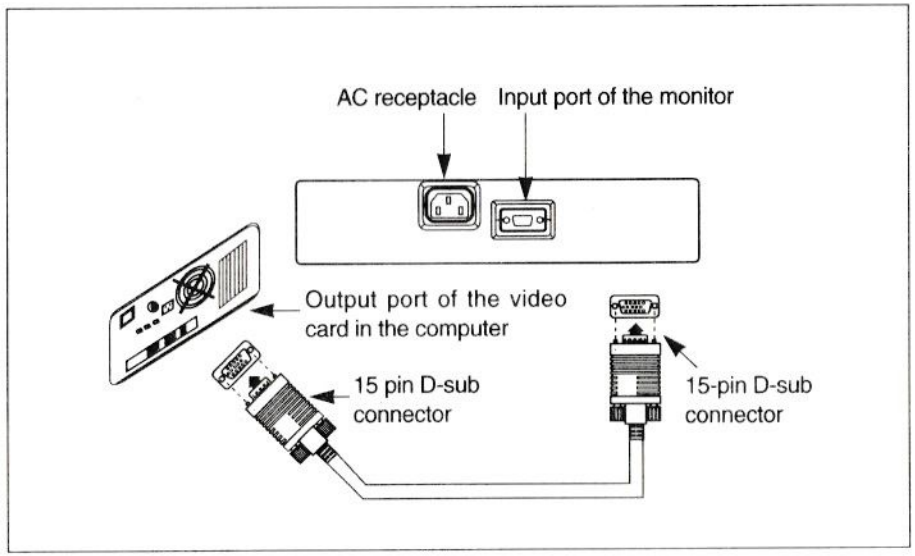
1. Ensure that the power to the monitor is off.
2. Set the monitor face down with the underside facing you. Please be careful so as not to scratch the monitor screen.
3. Align the four hooks on the stand with the slots at the bottom of the monitor.
4. Insert the hooks into the slots.
5. Slide the tilt/swivel stand toward the front of the monitor until the latch locks in position.
6. Turn the monitor and the stand upright.



If you want to remove the tilt/swivel stand on the monitor, press the latch and pull the tilt/swivel stand toward the back of the monitor. Lift the stand to separate.

CONNECTING THE SIGNAL CABLE

1. Turn off the computer and monitor.
2. Connect the 15 pin D-sub connector to the output port of the video card in your computer.
3. Connect the 15 pin D-sub connector to the input port located at the rear panel of the monitor.
4. Tighten the screws of both connectors.


AC receptacle
Input port of the monitor
Output port of the video card in the computer
15 pin D-sub connector
15-pin D-sub connector

If you want to connect the signal cable to the Macintosh computer :

1. Turn off the computer and monitor.
2. Attach the Macintosh cable adapter to the Macintosh video card.
3. Tighten the screws on the cable adapter.
4. Connect the signal cable provided with your monitor to the other end of the Macintosh cable adapter.
5. Connect the other end of the signal cable to the input port located at the rear panel of the monitor.
6. Tighten the serews between the Macintosh cable adapter and the signal cable.

CONNECTING THE POWER CORD

1. Plug the power cord into the AC receptacle located at the back of the monitor.
2. Plug the other end of the power cord into the AC outlet.

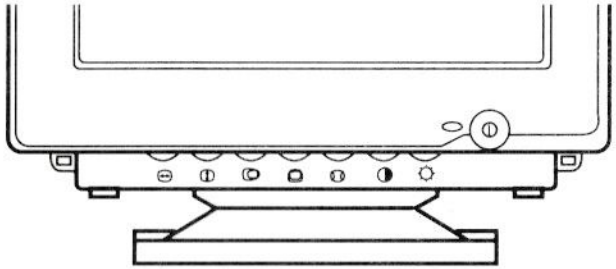
POWER MANAGEMENT SYSTEM

If you use the monitor with a computer which complies with the power saving program, you can set the monitor to go blank when the system has remained unused for a period of time. To specify the period or to disable this feature, set the system timeout field of the computer's system setup program or use special software for power saving. See the computer user's manual for the details of using the system setup. While the monitor is in power saving mode (blank screen), it consumes less power than normal state;the color of the power LED will indicate the state. To restore the screen image, press any key of your keyboard or move your mouse. If the signal cable is connected loosely or disconnected, the power saving feature will operate.

DISPLAY DATA CHANNEL (DDC) (* Optional)

If you use the monitor with a computer which complies with DDC1/ DDC2B of VESA, the Host-Video Card automatically configures itself without your intervention in a way that best fits the attached monitor.
The Display Data Channel, DDC, allow the monitor to inform the host system about configuration information for optimum use of the monitor .
Use of the Video Card utility is not required to match the resolutions and refresh rates of the monitor and video card.
See the computer user's manual or the Video Card user's manual for the details of DDC features.

OPERATION & ADJUSTMENT



The adjustment controls are located beneath the screen.

CONTROL	FUNCTION
POWER SWITCH	This switch is used to turn the monitor on or off.
POWER LED	The light of POWER LED changes according to each state. ● on mode : green ● power saving mode — stand-by mode : amber suspend mode : amber off mode : red
CONTRAST	This knob is used to adjust the contrast of intensities, the difference between light and dark areas on the screen.
BRIGHTNESS	This knob is used to adjust the brightness of the entire display.
H. SIZE	This knob is used to adjust the display width (horizontal size).
V.SIZE	This knob is used to adjust the display height (vertical size).

H. POSITION	This knob is used to adjust the position of the display horizontally (left or right).
V.POSITION	This knob is used to adjust the position of the display vertically (up or down.)
PINCUSHION	This knob is used to adjust the side pincushion / barrel to the straight.

MAINTENANCE

To clean the monitor, first turn it off and unplug it from its AC outlet. Wipe cabinet of the monitor with a cloth or a paper towel lightly dampened by household glass cleaner. Do not use alcohol, ammonia-based liquid or aerosol spray on the monitor screen. Do not spray a cleaner directly onto the screen.If liquid should soak into the monitor, the internal circuits may be damaged. Use a soft cloth to wipe the monitor screen, because the surface of the CRT is easily scratched.

SPECIFICATIONS

		1507X	1427X	1427S
Picture Tube	Type	15-inch, Flat Square Tube type (14-inch, viewing area)	14-inch, Conventional type (13.2-inch, viewing area)	
	Dot Pitch	0.28mm		
	Face Treatment*	Non-glare/Anti-static		
Video	Input Signal	R.G.B Analog		
	Amp. Bandwidth	65 MHz		45MHz
	Input Sync.	TTL, separate negative/positive		
Scan Frequency	Horizontal	31.4/35.1/35.5/37.5/37.8/46.8/48.0/48.3 KHz		31.4/35.1/35.5/37.5/37.8 KHz
	Vertical	50 - 100 Hz		
Max. Resolution		1024 dots × 768 lines (Non-interlaced)		800 dots × 600 lines (Non-interlaced)
Power Source		Free Voltage (100-240 Vac, 50/60Hz)		
Display Area	Standard Display Area	270(H) × 203(V)mm	250mm(H) × 187mm(V)	
	Full screen Size	284(H) × 212(V)mm	274mm(H) × 204mm(V)	
Power Consumption		Max. 80W		

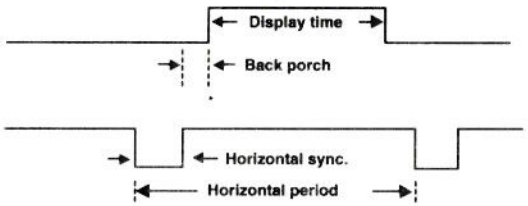
State	Recovery Time	Activity Light
On	None	Green
Stand-by	3sec	Amber
Suspend	3sec	Amber
Off	-	Red

* : Optional

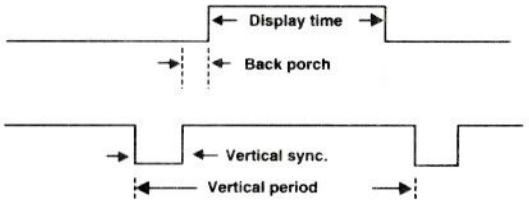
		1507X	1427X	1427S
Regulatory Approvals		Dafult / Optional		
		VLF/ELF: MPR Ⅱ, TCO 1992		
		Safety: UL, CSA, TÜV-GS (ZH 1/618/10.80), EMKO (S,N, D, FI), DHHS		
		EMI: FCC-B, CISPR 22, CE		
		Ergonomics: ISO 9241.3		
Tilt/Swivel Range	Tilt	5° forward, 12° backward		
	Swivel	±45° leftward, rightward		
Dimension (set with stand)		377(H) × 370(W) × 391(D) mm	362.5(H) × 354(W) × 380(D) mm	
Weight (net)		12.4Kg	10.6Kg	10.4Kg
Operating Environment	Temperature	10 - 40℃/50 - 104°F		
	Relative Humidity	8 - 80%		
Storage Environment	Temperature	20 - 45℃/68 - 113°F		
	Relative Humidity	5 - 90%		

SIGNAL TIMING GUIDE

Horizontal



Vertical



Mode	VGA			Super VGA	8514/A
Resolution	640×350	720×400	640×480	800×600	1024×768
Pixel Rate	25.175MHz	28.324MHz	25.175MHz	36MHz	44.908MHz
Interlace	NO	NO	NO	NO	YES
Sync on G	NO	NO	NO	NO	NO
H.Freq.	31.468KHz	31.332KHz	31.468KHz	35.156KHz	35.529KHz
H.Border		0.318μS	0.318μS		
H.S Width	3.813	3.813	3.813	2.000	3.919
Back Porch	1.907	1.907	1.907	3.556	1.247
H.Display	25.423	25.420	25.421	22.222	22.802
H.Total	31.778μS	31.916μS	31.776μS	28.444μS	28.146μS
Polarity	+	-	-	-(+)	+
V.Freq.	70.087Hz	69.782Hz	59.94Hz	56.25Hz	86.972Hz
V. Border		0.222	0.254		
V.S Width	0.064	0.064	0.064	0.057	0.113
Back Porch	1.907	1.117	1.049	0.626	0.563
V. Display	11.122	12.766	15.252	17.067	10.808
V.Total	14.268mS	14.330mS	16.682mS	17.778mS	11.498mS
Polarity	-	+	-	-(+)	+
Remark					

Mode	VESA VGA 75	VESA VGA 72	VESA SVGA 60	VESA 46K	VESA 48K	VESA 1024/60
Resolution	640×480	640×480	800×600	800×600	800×600	1024×768
Pixel Rate	31.5MHz	31.5MHz	40MHz	49.5MHz	50.0MHz	65MHz
Interlace	NO	NO	NO	NO	NO	NO
Sync on G	NO	NO	NO	NO	NO	NO
H.Freq.	37.5KHz	37.86KHz	37.879KHz	46.875KHz	48.09KHz	48.363KHz
H.Border						
H.S Width	2.032	1.270	3.20	1.616	2.399	2.092
Back Porch	3.810	4.064	2.20	3.232	1.279	2.462
H.Display	20.317	20.317	20.00	16.162	15.995	15.754
H.Total	26.667μS	26.413μS	26.400μS	21.333μS	20.794μS	20.677μS
Polarity	-	-	+	+	+	+
V.Freq.	75.00Hz	72.81Hz	60.316Hz	75.00Hz	72.01Hz	60.00Hz
V.Border						
V.S Width	0.080	0.079	0.106	0.064	0.124	0.124
Back Porch	0.427	0.740	0.607	0.448	0.479	0.600
V.Disaply	12.800	12.678	15.840	12.800	12.480	15.880
V.Total	13.333mS	13.735mS	16.579mS	13.333mS	13.887mS	16.666mS
Polarity	-	-	+	+	+	-
Remark				*	*	*

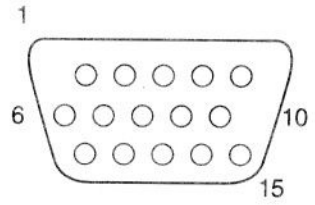
* : except 1427S

TROUBLESHOOTING

Symptom	Check
No picture.	Check if POWER SWITCH and COMPUTER POWER SWITCH are in the on position. Check if the signal cable is correctly connected to the video card or the computer. Check if the video card is completely seated in its slot. Check if the computer is in the power saving mode. Check if the pins of D-sub connector are not bent.
POWER LED is not lit.	Check if POWER SWITCH is in the on position. Check if the power cord is correctly connected.
Image is unstable.	Check if the signal cable is completely connected to the computer. Check if the signal cable is suitable to the video card.
Image is not centered, too small, or too large.	Adjust H&V SIZE or H&V POSITION to get the proper image.
Picture bounces or a wave pattern is present in the picture.	Keep the devices that may cause electrical interference away from the monitor. See the FCC information at the front cover of the manual.
Picture is blurred.	Adjust CONTRAST and BRIGHTNESS.
Edges of available area on the screen are not straight.	Adjust PINCUSHION.

APPENDIX

DESCRIPTION FOR D-SUB CONNECTOR



1) Non-DDC type

Pin	Signal
1	Red Video
2	Green Video
3	Blue Video
4	GND
5	GND (Test)
6	GND - Red
7	GND - Green
8	GND - Blue
9	No connection
10	GND - Sync.
11	No Connection
12	No Connection
13	Horizontal Sync.
14	Vertical Sync.
15	No connection

2) DDC type (Optional)

Pin	Signal
1	Red Video
2	Green Video
3	Blue Video
4	GND
5	GND - DDC9, 12, 15
6	GND - Red
7	GND - Green
8	GND - Blue
9	+5V (Optional)
10	GND - Sync.
11	No Connection
12	Bi-dir. Data (SDA)
13	Horizontal Sync.
14	Vert. Sync. (VCLK)
15	Data Clock (SCL)

*GND = Ground